Instructions for CRMEP 09/01/09 Draft POST-TREATMENT Checklist
FB - **FISH PASSAGE at BARRIERS**

To be used for fish passage improvement anywhere other than a stream crossing, but includes grade control or back-flooding weirs/structures associated with stream crossings. Grade control or back flooding weirs/structures not associated with stream crossings should be evaluated with the CB checklist.

Y = Yes, the question applies and the answer is yes, comment if needed. **P** = Partially, the question cannot be answered definitively yes or no, comment suggested. **N** = No, the question applies and the answer is no, comment if needed. **D** = Don't know, the answer is unknown and cannot be found; preferable to blank. **A** = Not applicable, the question or sub-question does not apply to the feature.

See Manual Part IX and VII for guidance. See below for 3-letter code key; see glossary for definitions.

THE SAME TREATMENT AREA THAT WAS DEFINED DURING THE PRE-TREATMENT EVALUATION MUST BE CONSIDERED WHEN COLLECTING THE FOLLOWING DATA. CONFIRM THAT THE FEATURE LOCATION WAS SUFFICIENTLY DESCRIBED USING THE PROTOCOL FOR DOCUMENTING THE LOCATION OF HABITAT RESTORATION FEATURES. USE LOCATION DOCUMENTATION UPDATED DURING IMPLEMENTATION MONITORING AS NEEDED.

STRUCTURE ***installation questions refer only to barrier modification structures such as fish ladders, tide gates and grade control or back flooding weirs constructed in conjunction with a fish passage improvement project.***
*If no structure was installed, answer **A** to questions in this section.*

1. Refer to design standards.
   a. Specify the current structural condition of feature: *EXCL* = (Excellent) the treatment is intact and structurally sound. *GOOD* = the treatment is intact and generally sound but some wear or undermining is evident. Components may have shifted slightly, but the treatment is intact. *FAIR* = the treatment position or condition has been altered significantly. *POOR* = the treatment is visible but has suffered significant movement or damage. *FAIL* = (Failed) The treatment is not visible or remnants are not in any form of designed configuration. (To be better defined)
   b. Refers to visual evidence of structure malfunction or lack of structural integrity. Actual problems, enter all that apply.
2. Refers to location of the structure linearly and laterally in the channel.
3. Applies only to back flooding weirs that are necessary to the functioning of a fish passage structure.

BARRIER ***questions refer only to the removal or modification of a natural or other non-culvert fish passage barrier.***
Use diagrams/photos/descriptions that document the barrier's pre-treatment condition.
*If there was no barrier removal or modification, answer **A** to questions in this section.*

4. If a barrier was removed, has another accumulated? Such as a tight canyon that tends to accumulate log debris.
5. If a barrier was modified, is it still in the same position and configuration as it was at the time of implementation?
   a. Refers to visual evidence of problems related to the modified barrier. If yes, list problems in comments.

FISH *questions 6-7* ***pertain to adult fish.*** **FISH** *questions 8-9* ***pertain to juvenile fish.***

6/8. If listed as a goal, answer based on quantitative data or visual evidence using best professional judgment.
   a. List species, by code from Restoration Manual Appendix E, for which passage improvement is aimed.

7/9. Answer based on quantitative data or visual evidence using best professional judgment. Refers to species in question 6/8a. Answer if possible, even if they were not the targeted life stage.

Barrier Category Definitions: *Temporal* – Impassable to all fish at certain flow conditions. *Partial* – Impassable to some fish species, during part or all life stages at all flows. *Total* – Impassable to all fish at all flows.

   a. Barrier category that now exists, enter only one. See Manual page IX-1.
   b. Conditions that are now blocking fish passage, enter all that apply. See Manual page IX-3.

CHANNEL ***questions should be answered regardless of goals.***

10. Pertains to any structure prescribed to control channel bed elevation as part of a barrier modification or structure installation. Refer to design specifications.
11. Applies to features where sediment had aggraded upstream of the barrier. Post-treatment, does that sediment remain?
12. Applies to features where there was scour, incision and/or head-cutting resulting from the barrier. Post-treatment has the channel stabilized or ceased to down cut?

13. Refers to other localized undesirable channel conditions such as braiding, flow obstructions, grade controls, undesirable lateral migration, narrowing, straightening, widening, etc. near the feature, not at a stream or reach level.

14. If listed as a goal, answer based on visual evidence using best professional judgment.
15. ***This question always applies; answer Y, N, D.*** Compare current conditions in the vicinity of the former barrier to pre-treatment conditions. Enter Y, if there were any detrimental or beneficial effects on substrate composition that were not specified in goals and explain in comments.

BANKS *questions should be answered regardless of goals.*

16. Stream bank erosion or apparent instability caused or affected by the former barrier.
    a. Location of erosion or instability relative to the former barrier. Record location as upstream of, downstream of and/or within the barrier AND left and/or right bank determined looking downstream (e.g. DNS – LBK, RBK UPS – LBK WIN – LBK). Use comment space if needed.
    b. Determine using visual evidence and knowledge of land use and erosion processes.
17. If listed as a goal, answer based on visual evidence using best professional judgment.
18. ***This question always applies; answer Y, N, D.*** Compare current conditions in the vicinity of the former barrier to pre-treatment conditions. Enter Y, if there were any detrimental or beneficial effects on the banks and substrate composition that were not specified in goals and explain in comments.

Movement of watershed* PRODUCTS *questions should be answered regardless of goals.

19. Refers to an accumulation of debris, substrate, or water behind the feature.
    a. Enter all that apply - debris (e.g. LDA), substrate (e.g. grade control) or water (e.g. at a dam or tide gate).
20. If listed as a goal, answer based on visual evidence using best professional judgment.

Effectiveness* RATING *is feature specific.

21. Rate the features effectiveness, not the structural condition. Keep in mind the degree to which it met the specific goals. (To be better defined)
    - EXCL = (Excellent) the project feature is performing according to objectives.
    - GOOD = there are some deficiencies in the projects feature's performance, but it is still performing in a satisfactory manner.
    - FAIR = there are some deficiencies in the project feature's performance and, these may cause problems in the future. Some characteristics of the feature, although not enough to cause corrective action at this time, require further scrutiny.
    - POOR = the feature is not performing in a satisfactory manner. Remedial action is required.
    - FAIL = (Failed) the feature has completely failed to meet objectives and/or is causing deleterious effects of habitat.
22. Enter all that apply, give details in comments.
23. Y if the feature needs or deserves further restoration effort, N if the site doesn't need further restoration or is not suitable for restoration activity.

Code

Key

ANC	Anchor failure
BAR	Lack of stabilizing vegetation, bare
BBB	Buried by bedload
BUR	Buried or "keyed in"
CBL	Cable
CRF	Cable/rebar failure
CHIN	Chinook salmon
CNR	Concentrated runoff
DEC	Decommission or remove
COHO	Coho salmon
CT	Cutthroat trout
DBR	Debris
DNS	Downstream
EMG	Emergent groundwater
ENH	Enhancement
FJH	Fish jump height
GRZ	Grazing/grazing animal
HYD	Hydrologic processes
LBK	Left bank
MAT	Material failure
MNT	Maintenance
NON	None
NRP	No resting pool
OTH	Other
PAR	Partial barrier
RBK	Right bank
REB	Rebar
REP	Repair
SH	Steelhead trout
SHF	Structure shifted
STR	Stranded out of active channel (horizontally)
SUB	Substrate
TEM	Temporal barrier
TOT	Total barrier
SWA	Stranded out of water (vertically)
UND	Undercut or undermined
UNS	Undersized or under-built
UPS	Upstream
USG	Unstable geology/soils
WIN	Within
WSH	Washed out
WTD	Water depth
WTR	Water
WTV	Water velocity